

Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

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Safety relay for emergency stop, safety door, and magnetic switches, as well as light grid, up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, 2 N/O contacts, TBUS interface, automatic or manual activation, plug-in screw connection terminal blocks

Product Features

- Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- Single and two-channel control
- 2 enabling current paths, 1 signaling current path
- For emergency stop and safety door monitoring, plus evaluation of light grids (suitable light grids available on request)
- Modular system with TBUS extension



Key commercial data

| | |
|------------------|---------------|
| package_quantity | 1 |
| GTIN | 4046356051682 |

Technical data

Note:

| | |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

Dimensions

| | |
|--------|----------|
| Width | 22.5 mm |
| Height | 99 mm |
| Depth | 114.5 mm |

Ambient conditions

| | |
|---|------------------|
| Ambient temperature (operation) | -20 °C ... 55 °C |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |

Input data

| | |
|---|----------------------|
| Nominal input voltage U_N | 24 V DC |
| Input voltage range in reference to U_N | 0.85 ... 1.1 |
| Typical input current at U_N | 70 mA |
| Voltage at input/start and feedback circuit | approx. 24 V DC |
| Typical response time | 20 ms (manual start) |

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Input data

| | |
|---|--|
| Typical response time | 150 ms (automatic start) |
| Typical release time | 10 ms |
| Recovery time | 1 s |
| Max. permissible overall conductor resistance | 50 Ω (Input and start circuits at U _N) |

Output data

| | |
|--|--|
| Contact type | 2 enabling current paths |
| Contact type | 1 semiconductor signaling output |
| Contact material | AgSnO ₂ |
| Maximum switching voltage | 250 V AC/DC |
| Minimum switching voltage | 15 V AC/DC |
| Limiting continuous current | 6 A (N/O contact) |
| Limiting continuous current | 100 mA (signal output) |
| Maximum inrush current | 6 A |
| Inrush current, minimum | 25 mA |
| Sq. Total current | $72 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2)$ |
| Interrupting rating (ohmic load) max. | 144 W (24 V DC, τ = 0 ms) |
| Interrupting rating (ohmic load) max. | 288 W (48 V DC, τ = 0 ms) |
| Interrupting rating (ohmic load) max. | 77 W (110 V DC, τ = 0 ms) |
| Interrupting rating (ohmic load) max. | 88 W (220 V DC, τ = 0 ms) |
| Interrupting rating (ohmic load) max. | 1500 VA (250 V AC, τ = 0 ms) |
| Maximum interrupting rating (inductive load) | 48 W (24 V DC, τ = 40 ms) |
| Maximum interrupting rating (inductive load) | 40 W (48 V DC, τ = 40 ms) |
| Maximum interrupting rating (inductive load) | 35 W (110 V DC, τ = 40 ms) |
| Maximum interrupting rating (inductive load) | 33 W (220 V DC, τ = 40 ms) |
| Switching capacity min. | 0.4 W |
| Output fuse | 10 A gL/gG NEOZED (N/O contact) |
| Output fuse | (Miniature circuit breaker C6 (24 V / 20 A power supply unit)) |

General

| | |
|----------------------------------|--|
| Relay type | Electromechanically forcibly guided, dust-proof relay. |
| Mechanical service life | Approx. 10 ⁷ cycles |
| Mounting position | Any |
| Category according to EN 13849-1 | 2 |
| Category according to EN 13849-1 | 4 |
| Stop category | 0 |
| Name | Air and creepage distances between the power circuits |
| Standards/regulations | DIN EN 50178/VDE 0160 |
| Rated surge voltage / insulation | 4 kV / Basic isolation, (safe isolation, reinforced insulation and 6 kV between input circuit and enabling current paths.) |
| Rated insulation voltage | 250 V |
| Pollution degree | 2 |

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Technical data

General

| | |
|------------------------|-----|
| Surge voltage category | III |
|------------------------|-----|

Connection data

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|--|---------------------|
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 12 |
| Stripping length | 7 mm |
| Screw thread | M3 |
| Connection method | Screw connection |

classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |
| eCl@ss 5.0 | 27371901 |
| eCl@ss 5.1 | 27371901 |
| eCl@ss 6.0 | 27371819 |
| eCl@ss 7.0 | 27371819 |
| eCl@ss 8.0 | 27371819 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001449 |
| ETIM 3.0 | EC001449 |
| ETIM 4.0 | EC001449 |
| ETIM 5.0 | EC001449 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211901 |
| UNSPSC 7.0901 | 39121501 |
| UNSPSC 11 | 39121501 |
| UNSPSC 12.01 | 39121501 |
| UNSPSC 13.2 | 39121501 |

approvals

UL Listed / GOST / cUL Listed / Functional Safety / cULus Listed /

Approval details

Safety relays - PSR-SCP- 24DC/SDC4/2X1/B - 2981486

approvals

UL Listed 

GOST 

cUL Listed 

Functional Safety

cULus Listed 

accessories

DIN rail connector

PSR-TBUS - 2890425



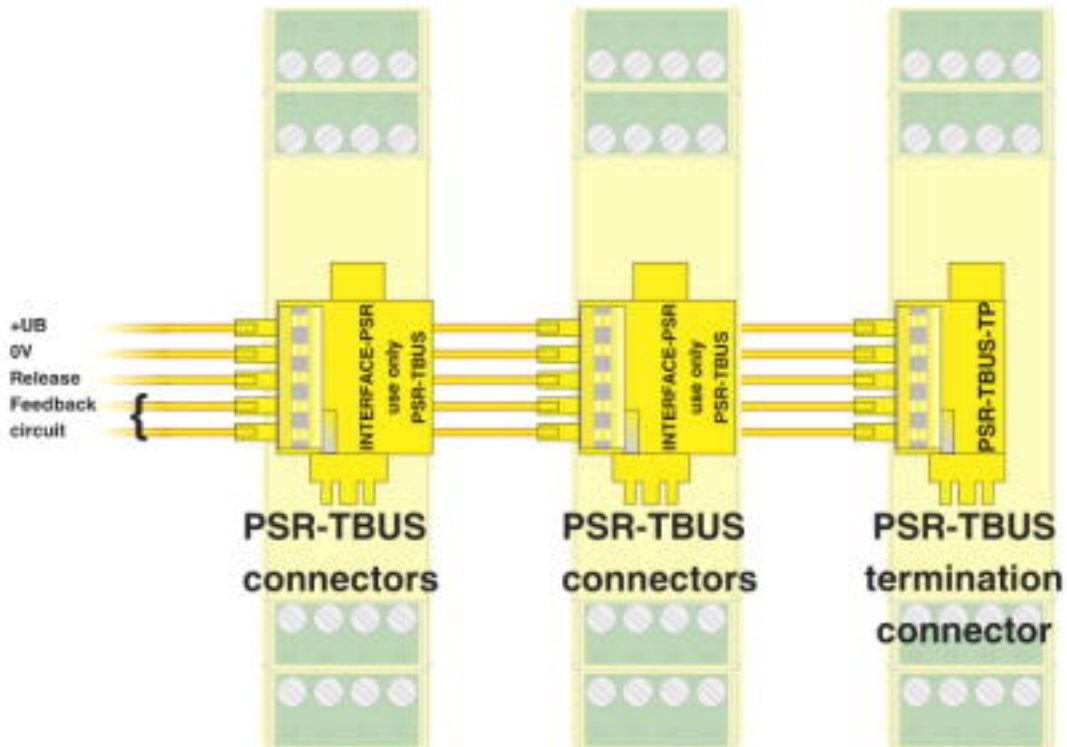
PSR-TBUS-TP - 2981716



Drawings

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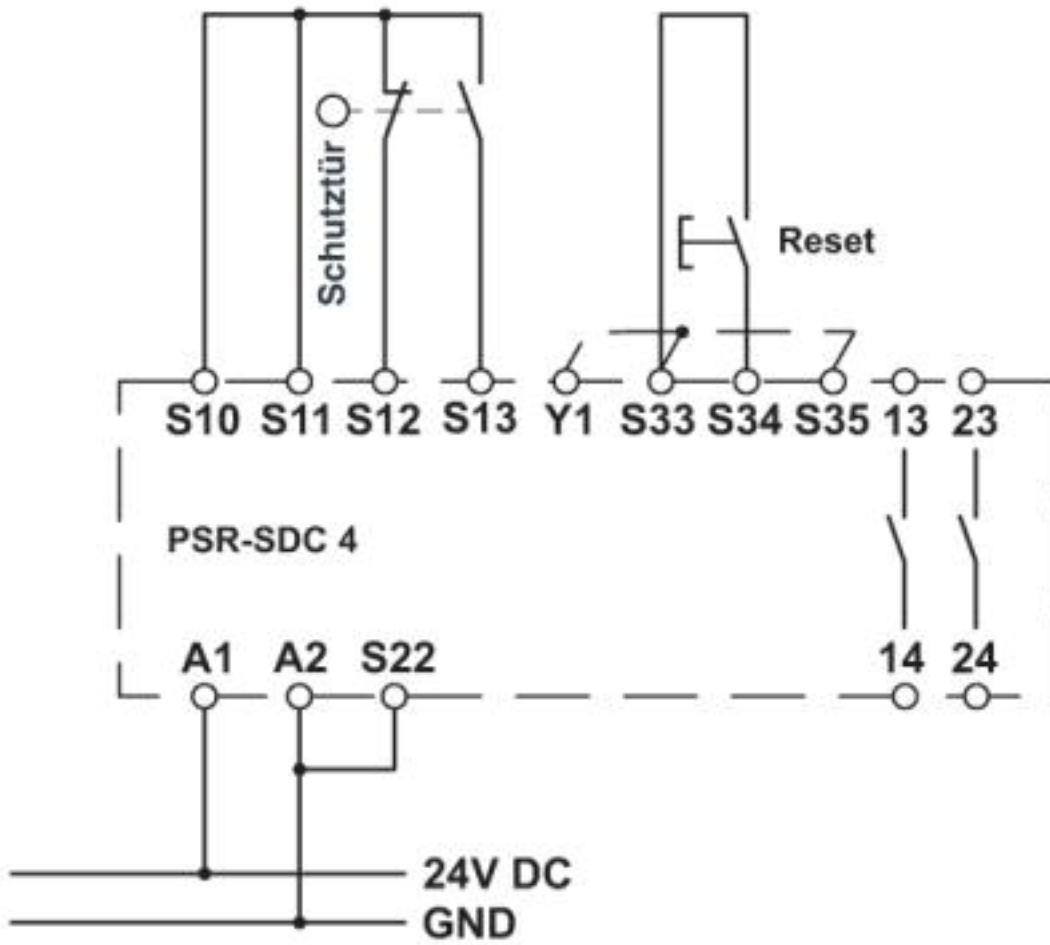
Connection diagram



The TBUS connectors carry out the cross-wiring between the modules.

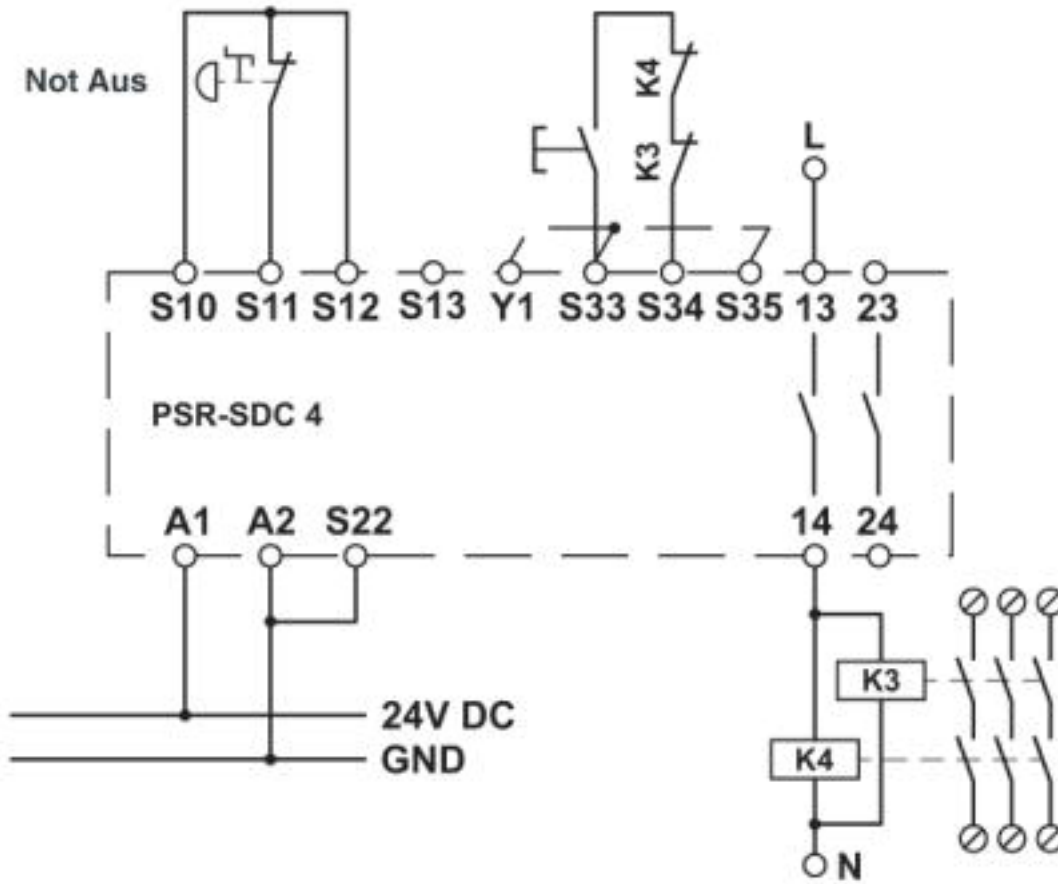
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Diagram



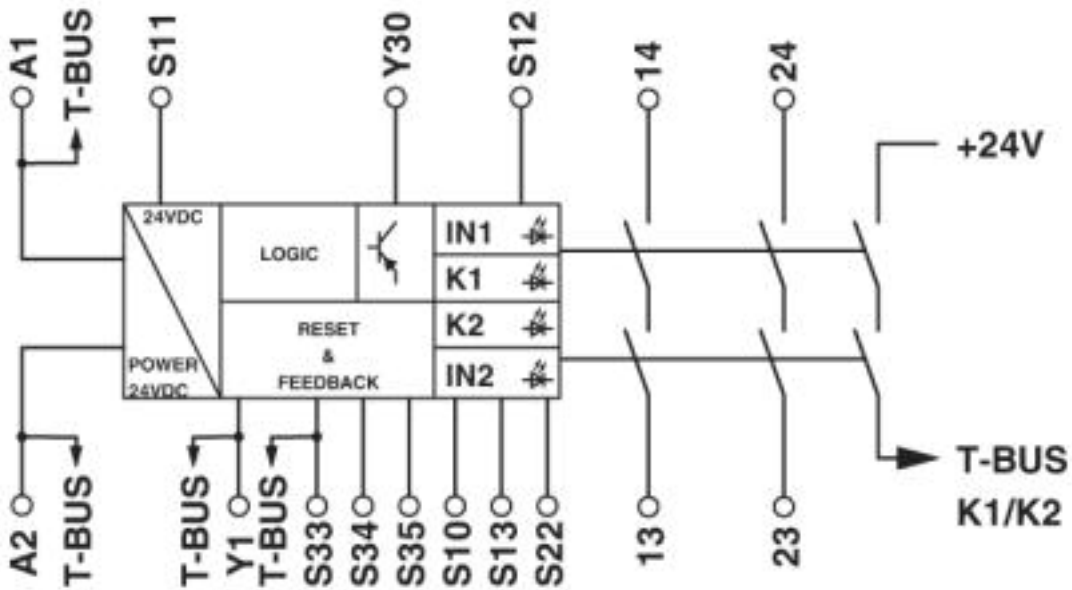
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Diagram

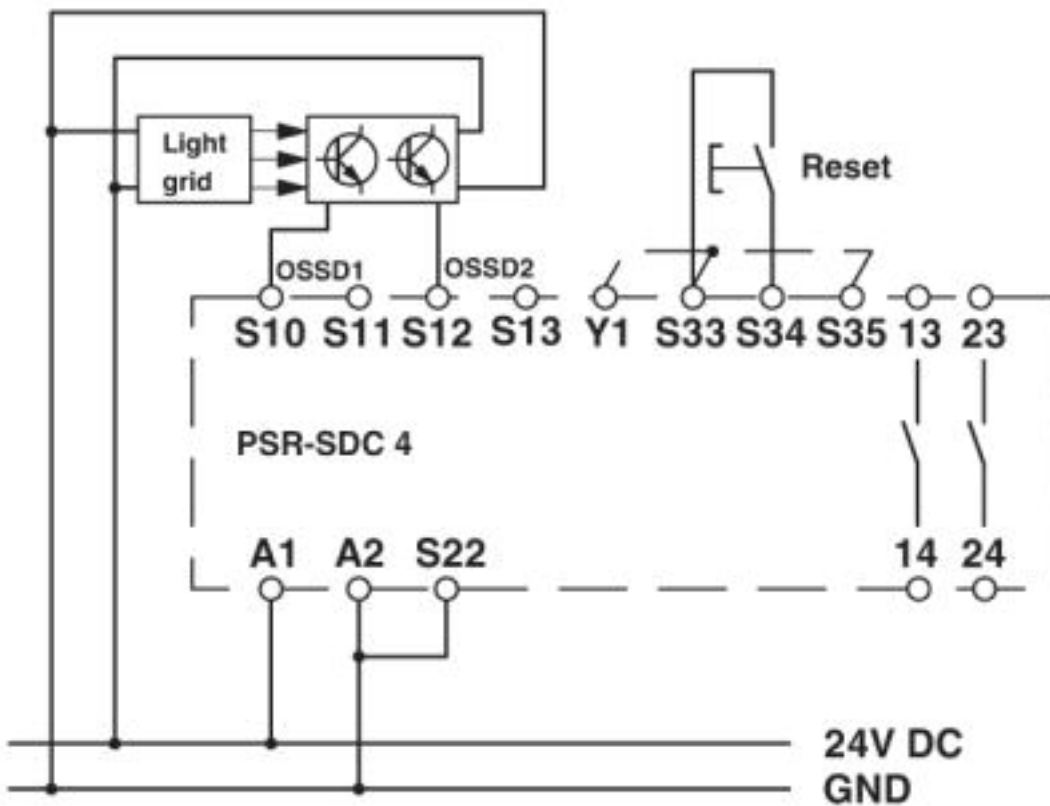


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Circuit diagram



Circuit diagram



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Circuit diagram

